IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

HUAWEI TECHNOLOGIES CO. LTD., Plaintiff, vs. VERIZON COMMUNICATIONS, INC., VERIZON BUSINESS NETWORK SERVICES, INC., VERIZON ENTERPRISE SOLUTIONS, LLC, CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS, INC., VERIZON DATA SERVICES LLC, VERIZON BUSINESS GLOBAL LLC, AND VERIZON SERVICES CORP. Defendants VERIZON BUSINESS NETWORK SERVICES, INC., CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS, VERIZON DATA SERVICES LLC, VERIZON BUSINESS GLOBAL LLC, VERIZON SERVICES CORP., AND VERIZON PATENT AND LICENSING INC. Counterclaim Plaintiffs, vs. HUAWEI TECHNOLOGIES CO. LTD., HUAWEI TECHNOLOGIES USA, INC., AND FUTUREWEI TECHNOLOGIES INC. Counterclaim Defendants	**C.A. 2:20-cv-00030-JRG** **JURY TRIAL DEMANDED**

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Statutory Authorities

TABLE OF EXHIBITS

I. CLAIM TERMS SUBJECT TO 35 U.S.C. § 112 ¶6 ARE INDEFINITE FOR FAILURE TO DISCLOSE CORRESPONDING STRUCTURE

A. Disputed Limitations That Invoke § 112 ¶6

The asserted claims of the '433, '236, '505, and '253 patents include multiple limitations that invoke § 112 ¶6.[1] Huawei argues that § 112 ¶6 does not apply, because a POSITA would allegedly understand that each term refers to a "known structure" and the claims as a whole provide "specific objectives" for each term. Huawei Br. 27-30. Huawei's cursory generalizations are incorrect. Although the terms in dispute do not use the word "means," the presumption against means-plus-function treatment is overcome because none of the recited "units," "subunits," or "modules" would have been understood by a POSITA to describe a particular structure for performing the recited functions. Ex. 1 ¶¶52-58; Ex. 3 ¶¶56-68 and 92-95; Ex. 4 ¶¶41-46; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349-51 (Fed. Cir. 2015) ("module" is a well-known nonce word tantamount to "means").

Unlike the term "digital processing unit" in *Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir 2020), which may connote sufficiently definite structure to a POSITA, these "units," "subunits," and "modules" have no established meaning in the art and lack any structural significance. Ex. 1 ¶¶52-53, 60, 70, 79; Ex. 3 ¶¶56-57, 73-74, 76, 81, 92-93; Ex. 4 ¶¶41-46; *Williamson*, 792 F.3d at 1349. For each term, the surrounding claim language merely recites function without any recitation of structure for performing the function, and the

[1] Huawei's Opening Brief only addresses whether these terms are subject to § 112 ¶6. Absent a single sentence in a footnote, Huawei does not address corresponding structure (Huawei Br. 30, n. 5), and it has therefore waived any arguments regarding that issue. Huawei has been on notice of Verizon's position that these are § 112 ¶6 terms and lack corresponding structure since at least the JCCS (Dkt. 59-1), and again when Verizon served expert declarations on indefiniteness (Exs. 1-4). It is too late for Huawei to raise arguments regarding corresponding structure in its Reply. *Dixon v. Toyota Motor Credit Corp.*, 794 F.3d 507, 508 (5th Cir. 2015) ("Arguments raised for the first time in a reply brief are waived."); *Plastronics Socket Partners, Ltd. v. Dong Weon Hwang*, No. 2:18-CV-00014-JRG, 2020 WL 1324733, at *8 (E.D. Tex. Mar. 20, 2020) (same).

specification contains no description that would lead a POSITA to conclude these terms refer to particular structures. Ex. 1 ¶¶61-62, 71-72, 80-81; Ex. 3 ¶¶59, 95; Ex. 4 ¶¶42-46. These terms are therefore subject to § 112 ¶6. *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *25-27 (E.D. Tex. May 1, 2020) (finding insufficient structure for terms e.g. "connection unit" and "communication unit"); *Huawei Techs. Co. v. T-Mobile US, Inc.*, No. 2:16-CV-00057-JRG-RSP, 2017 WL 2691227, at *36 (E.D. Tex. June 22, 2017) (finding that "selection module" and "key derivation module" did not recite structure).

Huawei's arguments for why the disputed "unit," "subunit," and "module" limitations do not invoke § 112 ¶6 are unavailing. First, even if the patents-in-suit "are intended for use with known G.709 or G.8032 equipment" (Huawei Br. 29), the G.709 and G.8032 "recommendations" do not dictate ***what structure*** manufacturers must use; they merely define the ***functional "interfaces"*** for compliance. Ex. 12 at §1 ("Scope").[2] Huawei also fails to show what in these standards would provide a POSITA the requisite knowledge to determine the corresponding structure for these terms. *Id.* The standards alone do not provide a POSITA with information about what structures are used to perform the claimed functions.

Second, Huawei admits that the '236, '433, and '253 patent claims do not recite a processor, but contends "the specification explains that the patents are designed to use existing OTN (for the '236 and '433 patents) or ethernet protection (for the '253 patent) technology . . . ." *Id*. But no such disclosure of hardware structures in the specification is found. For the '236 patent, Huawei cites a single sentence in the specification that expressly references a "***method*** for transmitting and receiving a client signal," which is not structure. *Id.* With respect to the '433 patent, Huawei points to the Abstract which references the OTN (*id.*), but as explained above,

[2] All emphasis added unless otherwise noted.

the OTN as set forth in the G.709 standard only provides guidelines and does not set forth the specific structure for implementing those guidelines. With respect to the '253 patent, Huawei relies on a single sentence in the specification that refers to an "existing Ethernet OAM mechanism," which it contends is a reference to the Y.1731 standard.[3] *Id*. The Y.1731 standard, like the G.709 and G.8032 standards, contains a purely functional disclosure and does not set forth any other structure or hardware that could carry out the recited functionality.

Third, Huawei incorrectly contends "the claims provide specific objectives for each of the claim terms at issue." *Id.* at 30. Unlike *Optis*, the claims here do not provided enough information for a POSITA to determine the requisite structure for performing the claimed functions. *Optis Wireless Tech., LLC v. Apple Inc.*, No. 2:19-cv-00066-JRG, 2020 WL 1692968, at *8 (E.D. Tex. Apr. 7, 2020), Ex. 1 ¶¶64-67 (claimed "decoding" in the '433 patent is set forth in functional language and can be done in numerous ways); Ex. 3 ¶¶57-58, 93-94 (claimed "units" of the '236 and '505 patents are set forth in purely functional language); Ex. 4 ¶¶41-42 (same for claimed "modules" of the '253 patent).

B. The Asserted Patents Fail To Disclose Sufficient Corresponding Structure

There is no corresponding structure for any of the claimed "unit," "subunit," and "module" terms, and therefore, these terms are indefinite.

1. "Unit" and "Subunit" Terms in the '433 Patent (Claims 6, 14)

The '433 patent does not disclose *any* corresponding structures, special purpose computers, or algorithms associated with the disputed "unit" and "subunit" limitations that perform the recited functionality. Rather, the only "structures" disclosed by the specification for performing the claimed functionalities are the same black box "units" and "subunits" that are

[3] Y.1731 is not referenced in the '253 patent and Huawei did not disclose it as extrinsic evidence pursuant to local patent rules. The standard and related expert testimony should be disregarded.

recited in the claims; a POSITA would not understand these disclosures of black boxes to refer to any particular structure or hardware. Ex. 1 ¶¶62-63, 72-81. For example, the specification is silent with respect to (i) any 64B/66B hardware and (ii) how any existing 64B/66B hardware should be configured to implement the claimed functionality, and a POSITA would not know which, if any of these known devices, could be the recited "units" and "subunits" (or how to configure them as such). *Id*. ¶¶64, 73, 82-83. The only instances where "units" and "subunits" appear in the specification provide no indication to a POSITA that the terms refer to particular components or structures for performing the functions recited in the claims. *Id.*

2. "Unit" Terms in the '236 (claims 7-12) and '505 Patents (Claims 3-4)

The '236 and '505 patents contain no disclosure of corresponding structure for any of the "unit" terms (absent, in some cases, black boxes). Ex. 3 ¶¶59-90; 95-107. The majority of these terms ***do not even appear*** in the figures or the specifications outside the claims or only appear in the "Summary" section as having completely different functions than those claimed. *Id.* ¶60 ('236 patent terms), ¶95 ('505 patent terms). Worse yet, Huawei cites to the same black box "structure" for multiple claimed "units" and cites to other black boxes completely divorced from the claimed functions. *Id.* ¶¶74 (black box "monitoring module 106" as claimed first and second processing units) and 75-80 (black box "filling module 102" as claimed "identifying unit" and "determining unit") for the '236 patent; ¶¶100-101 (black box "signal obtaining unit 71" for claimed first and second units) and 102 (black box "mapping unit 72" for claimed third and fourth units) for the '505 patent. Moreover, the patent specifications and figures do not disclose ***any*** algorithm for the claimed functions other than a mere restatement of the functions verbatim.

3. "Module" Terms in the '253 Patent (Claims 4 and 14)

The '253 patent's only disclosure of the recited "module" limitations is a "black box" paired with a purely functional description. Ex. 4 ¶¶48-76. The patent contains no mention of a

processor or any other hardware that could perform the recited functions. *Id*. This is similar to *Huawei v. T-Mobile*, where the patent only disclosed a "generic box" for the "selection module" and "key derivation module," with no indication of what those modules are or how they performed the function. 2017 WL 2691227 at *37. Even if the specification did disclose some general purpose hardware, it does not sufficiently disclose an algorithm for carrying out each of the recited functions. For example, claim 4 recites that the "alarm message processing module" sends a fault identifier to a "judging module," but the specification only describes that it sends an identifier to a "fault information storing module"; *i.e.*, this disclosure is not clearly linked to the claimed functions. '253 patent 2:27-31, 8:53-58; Ex. 4 ¶¶52, 63.

C. Huawei's Alleged Corresponding Structure is Deficient

Huawei identifies as alleged corresponding structure "hardware and/or software programmed to perform the algorithm described with respect to [portions of the specifications], and equivalents thereof," despite the fact that none of the patents disclose any "hardware and/or software" or any algorithm. Additionally, Huawei's citations to the specifications either have no relation to the claimed functions or merely restate the functions without disclosing an algorithm. Ex. 1 ¶¶ 60-61, 65-66, 70-71, 79-80, 84-85; Ex. 3 ¶¶ 89, 106; Ex. 4 ¶¶54-55, 60-61, 66-67, 70-71, 75-76. The specifications contain nothing to help define the scope of the functional language; Huawei wants to claim everything "under the sun" that performs the recited functions, rendering the terms indefinite. *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 519 (Fed. Cir. 2012).

II. '433 PATENT DISPUTED CLAIM TERMS

A. "data blocks containing data only" / "data block group containing data blocks only" (Claims 1, 6, 10, 14)

Verizon's Proposed Construction	Huawei's Proposed Construction
Data blocks containing service data only / data block group containing service data only	No construction necessary

Verizon's proposed construction is consistent with the claims, the specification, and the understanding of a POSITA. Ex. 5 ¶33. The claims, which Huawei agrees one should look to in construing this term (Huawei Br. 1), are explicit and consistent that data blocks contain "data only" and data block groups contain "data blocks only." The claims also differentiate placing the control blocks into a control block buffer and "placing the data blocks, as a data block group, into a data block buffer." The specification is similarly clear that the data blocks ***only*** contain data and are distinct from control blocks. Ex. 5 ¶31; '433 patent 4:47-55, 1:26-28, Figs. 7A-B. Nowhere does the specification or the claims describe the data blocks containing anything but data. '433 patent 4:47-55; Ex. 5 ¶32. The specification uses the term "service data" in its background to draw the difference between data and control information, which is how a POSITA would have understood the use of "service data" in the specification. Ex. 5 ¶¶32-33. *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1315 (Fed. Cir. 2003) ("[T]he best indicator of claim meaning is its usage in context as understood by one of skill in the art at the time of invention."). Under Huawei's interpretation of the claims, control information could be considered "data," but this interpretation is not supported by the claims or specification. Huawei has failed to point to anything in the intrinsic record to support such a reading.

B. "control block buffer" / "data block buffer" (Claims 1, 6)

Verizon's Proposed Construction	Huawei's Proposed Construction
Dedicated buffer for only control blocks / dedicated buffer for only pure data	No construction necessary

Similar to the "data block" terms above, the buffer for control blocks is only for control blocks and the buffer for data blocks is only for data blocks because two distinct buffers handle these two types of blocks. Ex. 5 ¶35. Huawei's expert implies that a buffer could alternate between being a data buffer and a control buffer or be partitioned into some data and some

control. Huawei Br. 2, Dkt. 82-11 ¶¶25-26. This view contradicts the claims, which explicitly differentiate between data block buffers and control block buffers. Specifically, the claims recite "placing the control blocks into a control block buffer as a control block group" and separately recite "placing the data blocks, as a data block group, into a data block buffer." '433 patent, cl. 1. Nothing in the claims or specification support Huawei's expert's understanding of these claimed buffers. Instead, Huawei's argument turns the specification on its head, stating that "if the term 'data block buffer' inherently meant a buffer that stores data blocks only, there would be no need to state that in this embodiment the buffer for the data blocks 'contain[s] data blocks only.'" Huawei Br. 2. But the explicit distinction between buffers is present throughout the specification—there is no other description of buffers. Ex. 5 ¶36; '433 patent 9:24-30, 12:45-52, 13:16-23, Fig. 7A ("Pure Data Block Buffer"); Fig. 7B ("Control Block Buffer"). Prosecution of the '433 patent further confirms that the "data block buffer" cannot be the same as the "control block buffer." Applicant amended then-pending claim 1 to clarify that "a buffer" in which data blocks are placed is actually a "data block buffer" distinct from the "control block buffer" already recited in the claim. Ex. 16, May 22, 2020 Response at 2.

C. Claim 1 Method Steps

Verizon's Proposed Construction	Huawei's Proposed Construction
The steps must occur in the order as recited by the claim	The steps need not occur in the order as recited by the claim

Huawei's arguments against reading the method steps in the recited order miss the mark. Verizon is not arguing "the control blocks be buffered before the data blocks." Huawei Br. 3. The plain language of the claim requires the steps occur in the order in which they are recited, such that (1) control blocks are placed into a control block buffer as a control block group before the first and second identifiers can be set, and (2) a control block must be known before the third

and fourth identifiers can be set. Ex. 5 ¶¶23-26. A POSITA would understand the control block group must exist and be defined before the first and second identifiers can be set, at least because the first identifier cannot "identify the control block group," nor the second identifier identify a "last control block in the control block group" without already knowing the control block group composition. Ex. 5 ¶¶23-24. Similarly, a POSITA would understand that a control block must be known before the third and fourth identifiers can be set because these identifiers use bits of "***each*** control block" to identify the type and position for "***each*** of the control blocks." The third and fourth identifiers each use bits from a control block byte available only *after* each control block is placed in the control block group buffer. *Id*. ¶¶25-6; '433 patent 9:24-38. If the steps did not follow this order, the claimed identifiers would not be able to serve their purpose and claim 1 would result in an inoperable method. Ex. 5 ¶27.

III. '151 PATENT DISPUTED CLAIM TERMS

A. "mapping the single low-rate traffic signal to the single low-rate traffic OPU is performed using a General Framing Procedure (GFP) or other adaptation protocols" (Claims 1, 7)

Verizon's Proposal	Huawei's Proposal
the mapping the single low-rate traffic signal to the single low-rate traffic OPU is performed using a General Framing Procedure (GFP), where the adaption protocol is either GFP-T or GFP-F. Alternatively, indefinite.	No construction necessary

The Court should adopt Verizon's proposed construction as it is the only possible construction that would not render the claim indefinite. The plain language of the claim requires "mapping the single low-rate traffic signal to the single low-rate traffic OPU is performed using a General Framing Procedure (GFP) or other adaptation protocols." If, as Huawei asserts, "other adaption protocols" encompasses *any* adaption protocol for mapping the low-rate traffic signal to a low-rate traffic OPU, then the limitation "performed using a General Framing Procedure (GFP) or other adaptation protocols" would be meaningless as the claim already requires "mapping,"

which can only be performed by an adaption protocol. Ex. 6 at ¶24. Huawei's proposed construction renders this term superfluous and should be rejected. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950–52 (Fed. Cir. 2006) (proposed construction rendering term "superfluous would render the scope of the patent ambiguous"). Verizon's proposed construction clarifies that the claimed "General Framing Procedure" and "other adaption protocols" are the Generic Framing Procedure (GFP), including either GFP-T or GFP-F—the only two adaption protocols encompassed by the claimed "General Framing Procedure." *Bell & Howell Document Management Prods. Co. v. Altek Sys.*, 132 F.3d 701, 707 (Fed. Cir. 1997) (claim term that clarifies limitation not superfluous).

The "Summary of the Invention" describes the invention as a whole and states in "the present invention, the GFP mapping is employed to map the low-rate (GE/FC) traffic signal into the ODUGE (low-rate traffic ODU) signal suitable for transmission in the OTN." '151 patent 3:34-39; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 864 (Fed. Cir. 2004) ("Summary of the Invention" section supports limiting definition). The specification consistently discloses only using General Framing Procedure (GFP), where the adaption protocol is either GFP-T or GFP-F—no other type adaptation protocol is disclosed. '151 patent 4:32-5:7, 5:46-62, 6:11-63, 8:26-30, 8:49-9:7, 9:24-40, 9:53-58, 10:2-12, 10:23-36; *Virnetx, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1317-19 (Fed. Cir. 2014) (disputed term limited to sole solution).

The original pending independent claims required mapping the low-rate traffic signal to the single low-rate traffic OPU, but did not explicitly state the mapping was performed by General Framing Procedure (GFP). Ex. 10. The independent claims were allowed based on an Examiner's Amendment requiring the mapping be performed by "General Framing Procedure (GFP)." Ex. 10 at Dec. 22, 2014 Notice of Allowance at 3. This amendment disclaimed using

any adaption protocol—the very construction that Huawei now seeks to impose here. Ex. 6 at ¶24; *Symantec Corp. v. Computer Associates Int'l, Inc.*, 522 F.3d 1279, 1289 n.2 (Fed. Cir. 2008) (even if amendment only made express what had been inherently claimed previously, significance is attached to the claim amendment); *Bid for Position, LLC v. AOL, LLC*, 601 F.3d 1311, 1316–17 (Fed. Cir. 2010) (amending claim results in disclaimer). Huawei cannot recapture claim scope it specifically disclaimed during prosecution.

If Verizon's proposed construction is not adopted, then the claim is indefinite. There are thousands of different possible adaption protocols for mapping signals within a network and at least 30 are disclosed in the G.709 standard alone. Ex. 2 at ¶48. Adaption protocols are not interchangeable and any attempt to use a different adaption protocol would result in an unusable signal. *Id*. As the specification only provides guidance on mapping with GFP-T or GFP-F, the claim would be indefinite if it covers *any* adaption protocol including ones that did not even exist at the time of the invention. *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1253 (Fed. Cir. 2008) (claim indefinite as construction "would allow the claims to cover not only that which it invented that was superior to the prior art, but also all future improvements").

B. "low-rate traffic" (Claims 1-13)

Verizon's Proposal	Huawei's Proposal
traffic rates less than 2.5 Gbps	No construction necessary

The '151 patent defines "low-rate traffic" as "traffic rates less than 2.5 Gbps." '151 patent 2:50-53 ("the low rate ***refers to*** a rate lower than 2.5 G bps"), 2:64-66 ("the low rate ***is*** a rate less than 2.5 Gbps"), 5:12-14; *C.R. Bard*, 388 F.3d at 864 (holding "Summary of the Invention" describes the invention as a whole and supports a limiting definition). A patent's use of "refers to" or "is" connotes a definition of a term. *Microsoft Corp. v. Int'l Trade Comm'n*, 731 F.3d 1354, 1360 (Fed. Cir. 2013) (finding "refers to" defined the "state" term in the claim);

Linear Tech. Corp. v. Int'l Trade Comm'n, 566 F.3d 1049, 1054 (Fed. Cir. 2009) (finding "refers to" defined "synchronously-switched switch"); *Sinorgchem Co., Shandong v. Int'l Trade Comm'n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) ("the word 'is' . . . may signify that a patentee is serving as its own lexicographer") (internal quotations omitted) (citation omitted).[4]

Huawei's reliance on the limitation "a rate of 1.06 Gbit/s" in claims 1 and 7 is inapposite as the "1.06 Gbit/s" limitation is not present in claim 13. Huawei Brief 5. Therefore, without applying Verizon's proposed construction, claim 13 would be unbounded.

C. "transmitting the ODUk via the OTN" / "transmitting a low-rate traffic signal in an Optical Transport Network (OTN)" (Claims 1, 7, 12)

Verizon's Proposal	Huawei's Proposal
transmitting the ODUk within an Optical Transport Network (OTN)	No construction necessary. In the alternative: transmitting the ODUk in an Optical Transport Network

Verizon's proposed construction properly clarifies how the ODUk is transmitted within an Optical Transport Network as required by the claims. As the Federal Circuit has held, the terms "via" or "in" are properly construed to mean "within" a network. *Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n*, 383 F.3d 1352, 1372 (Fed. Cir. 2004) (defining "storage means in a data processor" as a "device capable of retaining data located *within* a data processing device or system.") (emphasis added). Huawei's proposed construction fails to provide any clarity as to how the ODUk is transmitted in the network. Under Huawei's proposed construction, the mere existence of an ODUk signal in a network would be covered by the claim. However, this is not what is required by the claims, as the purpose of the alleged invention is to create and transmit an ODUk signal within an Optical Transport Network. '151 patent at Abstract, 9:46-52.

[4] In its Technology Tutorial, Huawei confirms that the '151 patent invention is directed to "low-rate traffic" that is approximately "1.25 Gbps." Huawei Tech. Tut. at 18-19. It is undisputed that the "invention" of the '151 patent defines "low-rate traffic" as less than 2.5 Gbps.

D. "rate rank" (Claims 1, 6)

Verizon's Proposal	Huawei's Proposal
the k value of ODUk or OPUk, where k equals 0, 1, 2, or 3 based on the traffic rate	No construction necessary

The sole dispute for the construction of "rate rank" is whether this term covers the version of the G.709 standard at the time of the '151 patent's effective filing date or, as Huawei alleges, it covers all subsequent and future versions of the standard. But black letter law states that the "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question ***at the time of the invention***." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (emphasis added). For claim terms that refer to a standard, the claim term's ordinary and customary meaning is the version of the standard ***at the time of the effective filing date of the patent application***. *Promethean Insulation Tech. LLC v. Sealed Air Corp.*, No. 2:13-CV-1113-JRG-RSP, 2015 WL 11027039, at *1-3 (E.D. Tex. Oct. 25, 2015) (construing term as identified by a certain industry standard in the version of the standard that was in effect ***at the time of the patent's effective filing date***). Huawei cites to *SuperGuide Corp. v. DirecTV Enters., Inc.*, but the terms at issue there were general terms like "signal" and "mixer" that were not defined by a standard. 358 F.3d 870, 876 (Fed. Cir. 2004). Here, the parties agree that "rate rank" is defined by the G.709 standard; therefore it must be defined by the standard in effect at the time of the effective filing date. Verizon's proposed construction defines "rate rank" as the G.709 standard defined that term at the time of the invention. '151 patent at 4:35-39.

E. "adapted to" / "configured to" (Claims 7-13)

Verizon's Proposal	Huawei's Proposal
Plain and ordinary meaning, with the understanding that this means not merely being capable of being configured but rather being	No construction necessary. In the alternative: Has the capability to

actually configured / adapted	

Verizon's "proposal of construing the term as meaning 'actually configured' [or 'adapted'] adds nothing that is not already present in the plain and ordinary meaning of the term. *SIPCO, LLC v. Amazon.com, Inc.*, No. 2:08-CV-359-JRG, 2012 WL 5195942, at *56 (E.D. Tex. Oct. 19, 2012). Contrary to Huawei's assertion, the claims do not allow for the mere capability of being configured or adapted. Instead, they state that the apparatus is "adapted to" and "configured to" perform the claimed function. '151 patent cls. 7-13. This is consistent with the specification, which uses "adapted to" and "configured to" to mean being actually configured or adapted. '151 patent 11:3-5 ("each node is configured in the way as shown in FIG. 8 so as to implement the uploading/downloading of the GE/FC/HDTV-rank traffic"); *Solocron Media, LLC v. Verizon Commc'ns Inc.*, No. 2:13-CV-1059-JRG-RSP, 2015 WL 1011310, at *12 (E.D. Tex. Mar. 5, 2015) (plain and ordinary meaning of "configured to" is actually "configured," not merely "capable of"); *SIPCO, LLC v. ABB. Inc.*, No. 6:11-CV-0048, 2012 WL 3112302, *7-*11 (E.D. Tex. July 30, 2012) (same); *E-Watch Inc. v. Apple, Inc.*, 2015 WL 1387947, *9-*10 (E.D. Tex. 2015) (same for "adapted for"). Huawei fails to show that a broader construction is supported.

IV. '982 PATENT DISPUTED CLAIM TERMS

A. "in groups of M Bytes" (Claims 1, 5, 9, 12)

Verizon's Proposal	Huawei's Proposal
Plain and ordinary meaning	In a M-byte granularity

The claim limitation "map[ping] . . . in groups of M bytes" does not require mapping "in a M-byte granularity," as proposed by Huawei. The plain and ordinary meaning of "in groups of M bytes" is clear and readily understood based on the plain language of the claim. Huawei's proposed construction needlessly complicates this claim by rewording the phrase and improperly

narrowing it to one example used in the specification. Huawei Br. 9-10; *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("[claim construction] is not an obligatory exercise in redundancy"). Because Huawei fails to show that this term is defined in the specification or the result of disclaimer or disavowal, its construction is incorrect.

B. "Lower Order Optical Data Unit (LO ODU) signal / Higher Order Optical Channel Payload Unit (HO OPU) signal" (Claims 1, 5, 9, 12)

Verizon's Proposal	Huawei's Proposal
ODUk (k=0, 1, 2, 2e, 3, 3e), where k is less than a k value for a higher order OPU / OPUk (k=1, 2, 3, 3e, 4), where k is greater than the k value for the lower order ODU	No construction necessary

The sole dispute for the construction of these terms is whether it covers the version of the G.709 standard at the time of the '982 patent's effective filing date or, as Huawei alleges, it covers all subsequent and future versions of the standard. For the reasons set forth above for the "rate rank" term of the '151 patent, these terms should be construed as the G.709 defines these terms at the time of the '982 patent's invention. '982 patent at 1:49-55.

C. "[encapsulating / encapsulate] overhead information to an overhead area of the ODTU signal" (Claims 1, 5)

Verizon's Proposal	Huawei's Proposal
[embedding/embed] overhead information from another protocol or layer into the overhead area of the ODTU signal	No construction necessary

Verizon's proposed construction is the plain and ordinary meaning of the claim term. The term "encapsulate" or "encapsulating" is well-known to a POSITA, and based on the intrinsic record, a POSITA would understand these terms mean embedding overhead information from another protocol or layer into the overhead area of the ODTU signal. Ex. 8 at ¶¶42-46. During prosecution, the Examiner cited prior art that confirmed that "encapsulate" or "encapsulating" meant embedding or embed overhead information from another protocol or layer into the

overhead area of the ODTU signal. *Id*. at ¶44 (citing USPN 2005/0286521 at ¶129 and USPN 2007/0076769 at ¶52). Additionally, Verizon's proposed construction is consistent with the definition in Encyclopedia of Networking, Second Edition, 1996. *Id*. at ¶45. Huawei's reliance on the G.709 standard is improper, as the claims are not coextensive with the standard. Instead, Huawei asserts that compliance with the G.709 standard infringes the claim. But "[c]laims are properly construed without the objective of capturing or excluding the accused device." *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1324 (Fed. Cir. 2009). Moreover, the G.709 standard does not use the term "encapsulate" or "encapsulating," so whether the standard embeds overhead information from another protocol or layer is irrelevant.

D. "time slot" (Claim 1)

Verizon's Proposal	Huawei's Proposal
fixed period of time during which data is transmitted or received	No construction necessary. In the alternative: Tributary slot

Verizon's proposed construction is the plain and ordinary meaning of "time slot." The term "time slot" is only used in claim 1 and is not used anywhere else in the specification. '982 patent cl. 1. As such, the plain and ordinary meaning of this term controls. The term "time slot" has a clear meaning to a POSITA, as it means "fixed period of time during which data is transmitted or received" in the networking and communications field. Ex. 8 at ¶¶47-49. Contrary to Huawei's assertion, "time slot" is not interchangeable with "tributary slot." While claim 1 uses the term "time slot," claims 4, 5, 8, 9, 11, 12, and 14 use the term "tributary slot," which confirms these terms are not interchangeable. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008) ("[o]ur precedent instructs that different claim terms are presumed to have different meanings"); *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the

claim is preferred over one that does not do so."). Additionally, the '982 patent claims priority to U.S. Pat. App. No. 12/712,675, which only uses the term "time slot." Huawei then filed the '982 application as a continuation application and amended the specification to remove "time slot" and instead use "tributary slot," confirming these terms are not interchangeable (otherwise, amending the specification would not be necessary). Ex. 11. Huawei's reliance on the G.709 standard to assert that "time slot" and "tributary slot" are synonymous fails, as the G.709 standard does not use the term "time slot"; it only uses "tributary slot."[5]

E. "tributary slot" (Claims 4, 5, 8, 9, 11, 12, 14)

Verizon's Proposal	Huawei's Proposal
a slot interleaved within the OPUk that includes a part of the OPUk OH area and a part of the OPUk payload area	No construction necessary

The sole dispute for this term is whether the construction covers all subsequent and future versions of the standard. This term should be construed as Verizon proposes for the same reasons described above with respect to the "rate rank" term of the '151 patent. Ex. 12 at Section 19.1.

F. "Optical Channel Data Tributary Unit (ODTU) signal" (Claims 1, 4, 5, 8-14)

Verizon's Proposal	Huawei's Proposal
Optical Channel Data Tributary Unit, as defined in Section 19.2 of the G.709 standard (12/2009)	No construction necessary

The sole dispute for this term is whether it covers the version of the G.709 standard at the time of the '982 patent's effective filing date or, as Huawei alleges, it covers all subsequent and future versions of the standard. For the reasons set forth above for the "rate rank" term of the '151 patent, these terms should be construed as the G.709 defines these terms at the time of the '982 patent's invention. Ex. 8 at ¶51-53.

[5] Contrary to Huawei's assertion (Huawei Br. 12), Dr. Min, did not agree that tributary slots and time slots are synonymous. Rather, he explained that a tributary slot is defined by the G.709 standard as "includ[ing] a part of the OPUk OH area and a part of the OPUk payload area." Ex. 14 at ¶40. A time slot is therefore very different from a tributary slot. Ex. 8 at ¶¶47-49.

V. '236 PATENT DISPUTED CLAIM TERMS

A. "client signal byte number Cn" (Claims 1-15)

Verizon's Proposed Construction	Huawei's Proposed Construction
Cn as defined in Equations D-1 or D-2 of the G.709 Standard (12/2009)	The number of client signal bytes in one OTN frame

It is undisputed that the variable Cn is well-defined in the G.709 standard and has ***no applicability*** outside the context of that standard. Ex. 7 ¶27 ("The term 'Cn' does not have a specific meaning outside of the G.709 standard."); Bortz Decl. ¶57 ("A POSITA would also have an understanding of Cn from the G.709 Standard."). Verizon's construction correctly interprets this term in light of ***the only two*** equations within the G.709 standard that define Cn, Equations D-1 and D-2.[6] Contrary to Huawei's assertions, these equations do not reflect "particular methods" of calculating Cn (Huawei Br. 14), but rather ***define what Cn is*** in the appropriate context of the G.709 standard. Since a POSITA would only understand this term in light of the G.709 standard and in view of these equations, Verizon's construction is correct. Ex. 7 ¶31 ("ITU-T considered the equations to be the common understanding of how Cn was to be defined and understood by those of ordinary skill in the art.").

The '236 patent specification expressly explains that the term Cn should be viewed in connection with the G.709 "Living List" document that first coined the term. *Id*. ¶¶28-29; '236 patent 5:17-34 (referencing the G.709 Living List). The specification and claims indicate that the Cn value is generated according to a "client signal clock and a system clock," which is consistent with both Equations D-1 and D-2 in the G.709 standard (as well as the Living List). Ex. 7, ¶33.

[6] Equation D-1 defines c_n while Equation D-2 defines $C_n(t)$. Ex. 12, Annex D. Huawei points out that Equation D-6 may be used to calculate Cn (Br. 14), but this equation just combines Equations D-1 and D-2 and redefines one of the parameters of D-1 (i.e., T_{server}) in terms of its constituent parts. Verizon would not oppose an alternative construction permitting Cn to be defined by "Equations D-1, D-2, <u>or</u> D-6 of the G.709 Standard (12/2009)."

These equations are not "equation[s] dictating a specific method of calculation" as Huawei alleges (Huawei Br. 15), but rather define Cn, a coined term, as that term would have been understood by a POSITA in light of the specification. Ex. 7 ¶31. *Phillips*, 415 F.3d at 1313 (claim terms construed "not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.").

Huawei's proposed construction only interjects more uncertainty into this term. Huawei's proposal would require the value of Cn to be the number of client signal byte numbers "in one OTN frame," without specifying which frame. *Id.* at ¶34. Since it is undisputed the Cn value changes from frame to frame (and is not a constant), it "makes little sense" to define Cn as a fixed value, as Huawei's proposal implies. *Id.*

B. "if the Cn transported in the OTN frame needs to be [increased / decreased]" / "the Cn transported in the OTN frame doesn't need to be increased or decreased" (Claims 1-3, 7-9, 15)

Verizon's Proposed Construction	Huawei's Proposed Construction
Indefinite under 35 U.S.C. § 112 ¶ 2	No construction necessary. In the alternative: if the Cn transported in the OTN frame needs to be increased / decreased relative to a Cn in a previous OTN frame

These terms recite a condition "[if] Cn . . .[needs / doesn't need] to be" increased or decreased, but nothing in the claims provides a POSITA with any context as to whether (or when) this condition is satisfied. Ex. 7 ¶46. These terms are so unclear that a POSITA "would have to guess or speculate as to when these claimed conditions are met because there is no information or guidance contained within the claims themselves." *Id.* Moreover, the specification does not recite "needs to be [increased / decreased]." *Id.* ¶49. The closest disclosure found in the specification reads "if ***it intends to*** [increase/decrease] . . ." ('236 patent 7:62-67; 8:11-16), but this language merely expresses a wish or desire to achieve an outcome and thus is as unclear as

the claim language. Ex. 7 ¶49. The specification never explains who or what "it" is. *Id.* Huawei's citations do not clarify when a value "needs to be" increased or decreased. *Id.* at ¶¶49-53.

This claim language creates a "zone of uncertainty" surrounding the proper scope of the claims, making it impossible to determine when infringement actually occurs. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 909-910 (2014). As explained above, Cn is defined by very specific equations in the G.709 standard such that its value naturally varies as the input to those equations are changed. A POSITA would understand that "there are ***countless reasons*** for adjusting the Cn value and ***none*** of those reasons would mean the Cn 'needs to be' increased or 'needs to be' decreased." Ex. 7 ¶47. Because this language renders the claims so ambiguous and unclear that a POSITA would not be able to ascertain their proper scope with reasonable certainty, they are indefinite. *Ultravision Techs., LLC v. Holophane Europe Ltd.*, 2020 WL 6271231, *27-28 (E.D. Tex. Oct. 26, 2020) ("desired uniformity ratio" indefinite); *Intellectual Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1381 (Fed. Cir. 2018) ("to optimize…QoS requirements" is "entirely subjective and user-defined" and therefore indefinite).

C. "revers[e/ing]…values of [a/the] [first / second] series of bit positions" / "values of a [first / second] series of bit positions…are reversed" / "values of a first series or a second series of bit positions…aren't reversed" (Claims 1-3, 7-9, 15)

Verizon's Proposed Construction	Huawei's Proposed Construction
reversing the order of the values of a [first / second] series of bit positions	No construction necessary

Huawei's brief seeks an improper construction without admitting as much, essentially striking "series of bit positions" from the claim and focusing on a single ***bit*** rather than ***positions*** in a ***series*** of bits. *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, 811 F.3d 1334, 1340 (Fed. Cir. 2016) (error to effectively strike "collection" from "pressurized collection vessel"). Huawei also tries to rewrite "reversing" as "inverting" or "flipping" – an improper construction, *Helmsderfer*

v. Bobrick Washroom Equip., Inc., 527 F.3d 1379, 1383 (Fed. Cir. 2008) ("[c]ourts do not rewrite claims"), especially where the patentee and the inventors have used these terms separately to convey separate concepts. Ex. 7 ¶47. Further, Verizon is not "inconsistent with the specification" (Huawei Br. 16) – the specification says "positions" are "reversed" and never mentions Huawei's "inverting" concept. '236 at 7:62-67 ("bit positions of the second area are ***reversed***"). Verizon's proposal accurately reflects the intrinsic and extrinsic evidence. If the Court concludes Verizon's proposal would not assist the jury, the jury should apply the claim exactly as written – not in the modified form Huawei's brief appears to advocate.

D. "[a / the] first series of bit positions" / "[a / the] second series of bit positions" (Claims 1-12, 15)

Verizon's Proposed Construction	Huawei's Proposed Construction
a second series of bit positions that does not overlap with the first series	No construction necessary

The claims recite ***two distinct series*** of bit positions within ***the same area*** of a frame: a first series and a second series. By using the modifiers "first" and "second," these two series cannot be the same. *Mass Engineered Design, Inc. v. Ergotron, Inc.*, 559 F. Supp. 2d 740, 754 (E.D. Tex. 2008) (construing "***first and second positions*** relative to said primary display" as "***two different positions*** relative to the primary display") (emphasis added). The example from the specification reproduced in Huawei's brief also shows the two non-overlapping series:

TABLE 1

Cbyte1 (row = 1)								Cbyte2 (row = 2)								Cbyte3 (row = 3)							
C	C	I	D	I	D	I	D	I	D	I	D	I	D	I	D	I	D	I	D	I	D	I	D

Huawei Br. 17 (citing '236 patent Table 1); *id.* at 9:5-11 ("22 bit positions are divided in two series of bit positions, that is, I bit positions and D bit positions"). The first series of bit positions

corresponds to all the 'I' bits and the second series corresponds to all the 'D' bits. A POSITA would know that the second series of positions does not overlap[7] with the first series.

E. "[whether] the [client signal byte number] Cn exceeds [a / the] range [of client signal byte number]" (Claims 2, 3, 5, 8, 9, 11, 13, 14)

Verizon's Proposed Construction	Huawei's Proposed Construction
whether the client signal byte number Cn is higher than a maximum value of Cn or lower than a minimum value of Cn	No construction necessary

Huawei agrees that the claim language recites a "range," but then argues that the range need not have any boundaries. Huawei Br. 17-18. Huawei's interpretation highlights why this term needs construction. The specification explains that "the Cn of a certain signal type born by the OPUk falls in a certain range, ***that is***, for a certain client signal type, ***a Cn maximum value and a Cn minimum value exist*** for the signal type born by the OPUk." '236 patent 6:51-55. A POSITA would have understood that exceeding the claimed range means falling outside that range, *i.e.*, whether the client signal byte number Cn is higher than a maximum value of Cn or lower than a minimum value of Cn. This is particularly true since the specification defines falling within the range using definitional language (*i.e.*, "that is"). *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1353 (Fed. Cir. 2010) (finding patentee defined "static" where specification read "[t]he values in the price column are static; ***that is***, they do not normally change positions . . .") (emphasis added). The patentee defined what it means to fall within a range and exceed that range.[8]

F. "identifying the Cn is normal [in a first area]" (Claims 3, 9)

[7] Verizon's construction does not preclude non-contiguous series, such as alternating bits. Huawei has no other criticism of Verizon's construction (Huawei Br. 17).

[8] Verizon's construction does not exclude varying the maximum and/or minimum values of Cn based on the client signal type, as Huawei suggests. Huawei Br. 17-18.

Verizon's Proposed Construction	Huawei's Proposed Construction
identifying the Cn falls in a range between the minimum value and the maximum value of the detected client signal Cn, or that the client signal type remains unchanged	No construction necessary. In the alternative, the longer term "identifying the Cn is normal in a first area" to be construed as "filling a first area with an identifier indicating that the Cn is normal"

The claims provide no indication what is meant by a "normal" Cn value, and numerical values are not typically thought of as "normal." A POSITA would have therefore looked to the specification for guidance in interpreting this term. The specification reads "[t]he normal Cn value refers to a Cn value acquired according to a client signal clock and a system clock that ***falls in a range between the minimum value and the maximum value of the detected client signal Cn*** (including the minimum Cn minimum value and the Cn maximum value), which represents that the client signal ***type*** born by the current OPUk ***remains unchanged***, and it is still the client signal ***type*** born by the previous OPUk." '236 patent 6:56-63. This statement amounts to an unequivocal definition of the "normal" Cn value; since the patentee acted as its own lexicographer, this definition must control.[9] *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012).

Huawei's alternative construction adds more ambiguity by requiring a new identifier that indicates that the Cn is normal. Huawei's construction is unhelpful and improper because it does not resolve the parties' dispute. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("When the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it.").

G. "generat[e/ing] / computing [a/the] [client signal byte number] Cn transported in an OTN frame period according to [a/the] client signal clock and a system clock" (Claims 1-3, 7-9, 13-15)

[9] As Huawei notes, the claims recite "acquiring" a client signal and not "detecting" one. Huawei Br. 18-19. Although the "detected client signal" comes directly from the specification, Verizon would not oppose slightly altering its proposed construction to read "the acquired client signal Cn" so that it has proper antecedent basis.

Verizon's Proposed Construction	Huawei's Proposed Construction
computing the client signal byte number Cn that was transported in an OTN frame period from the value of the client signal clock and the value of the system clock	No construction necessary

Huawei notes that a portion of these limitations has literal support in the specification (Huawei Br. 19), but that does not mean the entirety of the limitation as read together does not require construction. The claim and specification are unclear as to what generating (or computing) a value "according to" a clock means. The ambiguity is heightened here because the claim requires the Cn value to be generated/computed "according to" two clocks—a client signal clock and a system clock. One interpretation is that the Cn value mirrors the value of the two clocks. Another interpretation might be that the Cn value is generated/computed using the value of the two clocks as an input. Verizon's construction clarifies the language and explains that the Cn value is computed from the value of the client signal clock and the value of the system clock. This construction is consistent with the understanding of a POSITA. '236 patent 7:20-28 (defining Cn in an equation using the "client signal rate" and "payload rate" as inputs).

Huawei argues that clocks may be associated with "other parameters" besides its "value." Huawei Br. 20. This observation only heightens the uncertainty surrounding this claim language. A POSITA would not understand that a value is generated/computed "according to" two clocks just because the value might coincide with some parameter associated with the clocks. As described in the '236 patent, the Cn is computed using the "rates" of the client signal clock and system clock. '236 patent 15:3-26 (noting calculation of Cn using the "client signal clock rate" and "system clock rate"). The "rates" of the clocks are their instantaneous values.[10]

[10] Huawei faults Verizon's construction for lacking proper antecedent basis. Huawei Br. 19-20. Verizon would not oppose substituting the article "the" in its proposed construction with "a." Verizon would also not oppose substituting "rate of" for "value of" in its proposed construction to better match the specification. '236 patent 15:3-26.

Yet another issue with the claim language is the use of the past tense in connection with the transported Cn value. Whereas the claim is clear that the Cn value has already been "transport***ed***," based on Huawei's infringement contentions, Verizon expects Huawei to argue a sending node that "***will transport***" the generated/computed Cn value in ***the next frame*** infringes this claim. This cannot be because the claim language is clear: the Cn value has already been transported prior to the receiving node generating/computing the value. The specification also recites the past tense (*i.e.*, "transported") and never suggests that this value will be transported in the future. '236 patent Abstract ("A byte number Cn of a client signal ***transported*** in a OTN frame period . . ."); 3:1-3 ("Cn ***transported*** in an OTN"); 3:38-41 (same).

VI. '505 PATENT DISPUTED CLAIM TERMS

A. "Optical Channel Data Tributary Unit (ODTU) [frame]" / "ODTU [frame]" (Claims 1-4)

Verizon's Proposed Construction	Huawei's Proposed Construction
Optical Channel Data Tributary Unit, as defined in Section 19.2 of the G.709 standard (12/2009)	No construction necessary, however the Court should clarify that the ODTU frame referred to in the claims is not synonymous with the ODTUjk structure criticized in the patent

It is undisputed that the term "ODTU" does not have any meaning outside the G.709 standard. Ex. 7 ¶51; Bortz Decl. ¶54 ("in the 2009 version of the standard, ***section 19.2 describes an ODTU***"). Therefore, this term should be defined in accordance with that standard because that is how a POSITA would understand the term. Ex. 7 ¶¶49-51. Verizon's construction is therefore consistent with both experts' view of the term.

Fearing the prior art, however, Huawei alleges that the claimed ODTU cannot take the form of any ODTU described in the prior versions of G.709 (i.e., it must exclude "the ODTUjk structure" but include the ODTUk.ts structure that was only found in later versions of G.709). Huawei Br. 20-21. But Huawei is impermissibly importing limitations into a well-defined term.

Absent lexicography or disclaimer, the claims are not limited to a subset of ODTU that excludes the ODTUjk structure. *Liebel–Flarsheim Co. v. Medrad, Inc*., 358 F.3d 898, 913 (Fed. Cir. 2004). The term "ODTU" is not qualified in any way in the claims; it must therefore be construed to encompass all flavors and types of ODTUs. Ex. 7 ¶51. Moreover, the '505 patent ***never even mentions*** ODTUk.ts structures, so Huawei's insistence that the claims only cover these structures is illogical and incorrect.[11] *Id*. ¶42.

The patent specification does not "criticize" prior ODTU structures. Huawei Br. 20. Rather, it merely describes the function and operation of the ODTUjk structure consistent with how the G.709 standard describes it. *Id*. ¶55. The only "criticism" in the specification is an alleged improvement of "the definition of the OPUk TS structure" and not the ODTU structure. *Id.* ¶56. In any event, this "criticism" would not rise to a clear disavowal of the ODTUjk structure warranting any special exclusion of these structures. *Thorner*, 669 F.3d at 1366-67 ("To constitute disclaimer, there must be a clear and unmistakable disclaimer.")

B. "determining a quantity of n-bit data units of the client signal based on a clock of the client signal and a local clock" (Claims 1-4)

Verizon's Proposed Construction	Huawei's Proposed Construction
determining the number of n-bit data units of the client signal from the value of the client signal clock and the value of the local clock	No construction necessary. In the alternative: determining a number of n-bit data units of the client signal based on a clock of the client signal and a local clock

As discussed above in connection with the term "generating a client signal byte number Cn . . ." from the '236 patent, a POSITA would not understand what determining a value "based on" two clocks means. The patent specification parrots this claim language, but does not

[11] Nor do the claims recite "mapping information from the Cn byte" (or even "Cn"), as Huawei contends. Huawei Br. 20. The claimed client signal byte number is encoded in the three JC bytes within the ODTUjk structure. Ex. 12 §17.7. Verizon's construction is therefore not "at odds" with the claims, specification, or ODTUjk structure. Huawei Br. 21.

otherwise explain how the value is determined from the two clocks. As explained in the '236 patent, however, the claimed quantity of n-bit data units is calculated using the values, or rates, of the client and system clocks. '236 patent 7:20-28; 15:3-26. This term should therefore be construed consistently with the corresponding term in the '236 patent.

C. "n-bit data units / n indicating the number of the multiple OPUk TSs" (Claims 2-3)

Verizon's Proposed Construction	Huawei's Proposed Construction
units of data comprising n bits, where the value 'n' is the same throughout the claim	No construction necessary, but the Court should clarify that the word "n-bit data unit" refers to a data unit containing some number of bits, not a data unit with bits equal to the number of the multiple OPUk TSs

As Huawei acknowledges, these claims recite both "n-bit data units" and "n indicating the number of multiple OPUk TSs." Huawei Br. 21-22. If the two values of "n" were intended to take different values in the same claim, then different variable names should have been used. *Phillips*, 415 F.3d at 1314 ("claim terms are normally used consistently throughout the patent"); *Dareltech, LLC v. Samsung Elecs. Co.*, No. 4:18-CV-702, 2020 WL 1248500, at *15 (E.D. Tex. Mar. 16, 2020) ("the same terms appearing in different portions of the claims should be given the same meaning"). While Huawei cites examples of "n" used in different contexts within the ***specification*** (Huawei Br. 22), the ***claims*** must particularly point out and distinctly define the scope of the invention. 35 U.S.C. § 112 ¶2. A POSITA would understand that a variable name used in the claims defines and fixes that variable. Plus, the specification does not prohibit the number of OPUs TSs from equaling the number of bits in a data unit. As Huawei admits, "[i]t is possible for these to sometimes be the same" (Huawei Br. 22), so Verizon's construction is consistent with the specification.

D. "Optical Channel Payload Unit-k Tributary Slot (OPUk TS)" (Claims 2-4)

Verizon's Proposed Construction	Huawei's Proposed Construction
Optical Channel Payload Unit-k Tributary Slot (OPUk TS), where k = 1, 2, 3, or 4	No construction necessary

Huawei agrees that the variable "k" represents a bit rate. Huawei Br. 2. The parties dispute the range of permissible "k" values. Because the claims give no context or description of the value "k" and the parties have a genuine dispute, this terms needs to be construed. *O2 Micro*, 521 F.3d at 1362. Huawei admits that the specification only describes bit rates (j, k) that can take the values 1, 2, or 3, and therefore, a POSITA would understand that k can only take these values. *Id.*; '505 patent 1:42-59; 5:36-44. The specification explains that "the G.709 recommendation ***defines*** an Optical Channel Payload Unit-k Tributary Slot (OPUk TS)." '505 patent 1:53-59. At the time of the '505 patent, the G.709 standard also included k = 4. Ex. 12, § 13. Verizon's construction is consistent with the specification and G.709 standard.

E. "mapping each byte of the second ODTU frame to at least one Optical Channel Payload Unit-k Tributary Slot" (OPUk TS) (claims 1-4)

Verizon's Proposed Construction	Huawei's Proposed Construction
mapping each 8-bit block of the second ODTU frame to at least one OPUk TS	No construction necessary.

Huawei and its expert admit that a "byte" is comprised of "8 bits." Huawei Br. 23; Bortz Decl. ¶103. It is surprising, therefore, that Huawei refused to agree to Verizon's construction during the meet and confer process. Because even Huawei admits that "the term 'byte' is a well-understood term of the art," the Court should adopt Verizon's construction.[12]

VII. '253 PATENT DISPUTED CLAIM TERMS

A. "judging" / "determining" Terms (Claims 1, 4, 6, 9, 14)

Verizon's Proposal (representative, for claim 1)	Huawei's Proposal

[12] Huawei alleges that the term "block" "potentially introduces confusion" into this term (Huawei Br. 23), but a "byte" is defined as 8 "adjacent" bits or "a group" of 8 bits, both of which constitute a block. Ex. 15 (collecting definitions).

"judging whether the identifier contained in the fault alarm message is different from an identifier stored in the second node for the port on which the message is received" Alternatively, *indefinite*.	No construction necessary.

The judging/determining terms recite functionality of a node upon receipt of a fault alarm message—the node judges whether an identifier in the message is "different" from a stored identifier record. The patent describes that nodes maintain a record with two values: a first identifier (e.g., a source address) for fault alarm messages received at one ring port, and a second identifier for messages received at a second ring port. '253 patent 3:30-35, 4:36-38, 4:53-62, 6:3-24. This makes sense because fault alarm messages are sent in ***both directions*** around the ring, as illustrated in Figures 4-7, and thus nodes receive two different alarm messages, one at each port. *Id*. 4:52-55, 6:3-15. Nodes will then clear a forwarding table "[w]hen the fault identifier maintained by the node changes." *Id*. 3:35-37. The specification consistently describes that this is done by "judging whether the source address of the [fault alarm] message received by the ***corresponding port*** is changed; if the source address is changed, the fault identifier is determined as changed." *Id.* 5:22-26, 6:15-24, 6:56-67.

Verizon's constructions are consistent with the specification and how a POSITA would interpret the terms. A POSITA would have recognized that the "identifier" in the fault alarm message is one value (e.g., a source address), while the "fault identifier record stored in the second node" is potentially a ***pair*** of values (identifiers from fault messages received on both ports). Ex. 9 ¶¶11-13. They also would have recognized the ambiguity in determining if one value is "different" from a pair of values. *Id.* The patent only describes determining if the fault identifier ***for the port on which the message is received*** has changed; it provides no guidance as to whether (or how) an identifier for the other, non-receiving port could be used. *Id*.

If these terms are not interpreted consistent with the specification, they fail to meaningfully limit the claims. For example, a received identifier could be judged to be

"different" from the stored record simply because it is a single value, while the record is a pair of values, and a single thing is necessarily "different" from a pair of things. *Id.*, ¶¶14-15. There is no indication that the inventors intended their claims to cover such a scenario. *Id.* As a result, a POSITA would have understood these limitations to be directed to what is disclosed—a determination of whether the stored identifier for the corresponding port changed. *Id.*, ¶¶14-16.

Huawei's arguments miss the mark. Huawei argues that Embodiment 4 is the only one in which source addresses are stored "based on the port" (Huawei Br. 24), but ignores the other embodiments in which the fault identifier record is a pair of values, one for each port. '253 patent 3:30-35, 4:53-62, 6:3-24. Furthermore, Verizon's proposal would not exclude the embodiment in which the fault record is null, and Verizon does not seek to remove "a second node"—that is not even part of the term to be construed (as indicated by ellipses).[13]

B. "configured to" (Claims 4, 6, 14)

Verizon proposes the same construction for this term in the '253 patent as for the '151 patent, and Verizon's construction should be adopted for the same reasons described above.

C. "null" (Claim 12)

Verizon's Proposal	Huawei's Proposal
No value	No construction necessary.

The specification provides no indication that the inventors intended to depart from the ordinary meaning of the term "null," which is a character having "no value." '253 patent 4:66-5:21. The Microsoft Computer Dictionary defined "null character" ("NUL") as "literally, a character meaning nothing," and its Appendix showed that NUL has its own code, unique from other characters like the digit "0." Ex. 13. Huawei imagines an embodiment in which a record is

[13] That Verizon did not propose this construction in IPR is irrelevant and not a waiver in this proceeding. As explained in its petition, construction was not necessary to resolve the issues in IPR because the claims are unpatentable under *any* reasonable construction. Ex. 17 at 24-25.

null "because it contains a zero value or sequence of all zeroes." Huawei Br. 25. There is no such embodiment—the patent never describes a "null" value as a zero or sequence of zeroes.

VIII. '485 PATENT DISPUTED CLAIM TERMS[14]

A. "a link where a normally blocked port locates" (Claim 8)

Verizon's Proposal	Huawei's Proposal
a link connected to a port that has been configured to be blocked when there are no faults in the Ethernet ring network	No construction necessary.

This term would be confusing to a juror. Huawei asserts it "speaks for itself," but then explains that it means "a link between two ports for two nodes, where one of the ports is the port that is normally blocked to prevent loops in the Ethernet ring network." Huawei Br. 26. Verizon disagrees that its proposed construction is incorrect or excludes any embodiments, but would accept a construction based on Huawei's explanation: "a link between ports of two nodes, where one of the ports is normally blocked to prevent loops in the Ethernet ring network."

B. "Automatic Protection Switching (APS) packet in Ethernet protection switching mechanism" (Claim 8)

Verizon's Proposal	Huawei's Proposal
a packet used in an automatic protection switching protocol in an Ethernet protection switching mechanism	No construction necessary.

Verizon's proposed construction reflects the common understanding of APS packets, and clarifies a packet need not be named "Automatic Protection Switching" or "APS." Huawei takes issue with the word "protocol." Huawei Br. 27. Verizon would not object to its removal, e.g., "a packet used for automatic protection switching in an Ethernet protection switching mechanism."

IX. CONCLUSION

Verizon respectfully requests that the Court find the disputed § 112 ¶6 terms indefinite, and adopt its proposed constructions for the remaining terms in dispute.

[14] Verizon hereby withdraws its indefiniteness position as to "the non-clearing indication indicates that a forwarding table is not desired to be cleared by the other ring nodes" (claim 8).

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Respectfully submitted,

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(by E. Glenn Thames, Jr., with permission)

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CERTIFICATE OF SERVICE

Pursuant to Local Rule CV-5(c), the undersigned hereby certifies that all counsel of record who have consented to electronic service are being served with a copy of this document via ECF on November 20, 2020.

/s/ E. Glenn Thames, Jr.
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